5

ARRAY PREFETCH APPARATUS AND METHOD

Boris A. Babaian, Valeri G. Gorokhov, Feodor A. Gruzdov, Yuli Kh. Sakhin, and Vladimir Yu. Volkonski

ABSTRACT OF THE DISCLOSURE

An array prefetch system improves processor performance by automatically tuning a statically compiled and compacted loop program at run-time to accommodate variations in latency of memory read operations. Using the array prefetch system, the processor, while awaiting completion of a data access, continues to generate requests for subsequent iterations rather than fully halting execution until a read access is 10 finished.